Report Number: ICRR0021758

1. Project Data

Project ID P121116	**Project Name** MX Sust Production Systs & Biodiversity
Country Mexico	**Practice Area(Lead)** Agriculture and Food

L/C/TF Number(s)	**Closing Date (Original)**	**Total Project Cost (USD)**
TF-12908	31-Aug-2017	10,798,143.03
Bank Approval Date	**Closing Date (Actual)**	
30-Aug-2012	31-Dec-2018	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	11,688,182.00	11,688,182.00
Revised Commitment	11,688,182.00	10,798,143.03
Actual	10,798,143.03	10,798,143.03

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

The PDO, as stated in both the Grant Agreement and the PAD was to, "*conserve and protect nationally and globally significant biodiversity in Mexico through mainstreaming biodiversity friendly management practices in productive landscapes in priority biological corridors.*"

There was no change in the objectives during the project period.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

Component 1. Sustainable Production Systems and Biodiversity Mainstreaming (Original US$16.86 million; Actual US$10.28 million). This was to assist Producer Groups (PGs) to carry out sustainable production practices against approved business plans, shifting farming away from conventional practices to more biodiversity friendly practices; to provide training through Technical Service Providers (TSPs) and establish Technology Transfer Units (UTT) to conduct research development and innovation to build capacity in PGs and Producer Associations (PAs).

Component 2. Producer Associations and Biodiversity-Friendly Market Initiatives (Original US$8.01 million; Actual US$4.63 million). This was to strengthen PAs and networks of PGs and to establish business alliances for bio-labeled products. It included financing technical assistance to establish collaborative and contractual arrangements between buyers and PAs and to support market studies and plans for product promotion and other support like trade fairs with an aim to reach national and international markets. Implementation was to be through business-oriented subprojects with each supported PA.

Component 3. Institutions, Eco-labelling, and South-South Cooperation. (Original US$4.60 million; Actual US$2.75 million). This included the development of a strategy for strengthening institutional capacity, support for the design and use of market differentiation tools, and the promotion of partnerships and South-South cooperation including study tours and workshops for PA members.

Component 4. Project Management and Monitoring (Original US$3.70 million; Actual US$4.45 million) this included the financing of consulting services, operational costs for project management, supervision, procurement, financial management, and monitoring and evaluation (M&E).

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost

The Total Project Cost at approval was expected to be US$33.17 million (this did not include any private sector amount which later, by project closing, had totaled US$2.63 million). The actual total at project closing was only US$22.11 million, about 66% of the original approved. The difference was due partly to a substantial change in the value of the local currency allowing more local investment for the dollars provided and partly due to a substantial decrease, by about 60%, in the borrower contribution. (See further discussion below under Financial Management). Despite the reduced $ cost, a larger number of PAs and beneficiaries than planned were provided support under the project.

Financial

At approval, IBRD (GEF) financing was to be US$11.69 million but by closing was somewhat lower at US$10.80 million. The project had no cofinanciers.

Borrower Contribution

At approval, the borrower contribution was expected to be US$19.20 million, but this fell substantially to US$7.11 million due to national budget problems. Beneficiary contribution was expected to be US$2.28 million at approval but by project closing was US$1.57 million, a drop of about one third. This was despite a significant increase in the number of PAs and beneficiaries. The reason for this shortfall is not clear.

Dates

The project was approved August 30, 2012, became effective February 28, 2013, and closed December 31, 2018, one year and four months after the original planned closing date. A Midterm Review took place in September 2015.

3. Relevance of Objectives

Rationale

The project objectives were well aligned both at closing and over the lifetime of the project with the Bank's Mexico Country Partnership Strategy (CPS, 2014 – 2019), particularly the CPS pillar "Promoting Green and Inclusive Growth" and the CPS pillar "Unleashing Productivity". The intent was to introduce environmentally conscious practices but ones that were able, through a win-win strategy, to increase producer incomes and profitability. However, this highlights a weakness in the formulation of the objective statement. As it was formulated, the intent to increase producer incomes and profitability was not treated as an equal outcome to the biodiversity element, it was treated as a means to achieving biodiversity conservation although, in the ICR, biodiversity friendly management practices and productivity incentives were treated and rated in the assessment as two objectives on a par with the first biodiversity objective. In this IEG ICRR, given the objective formulation that places the intermediate outcome or output objectives after the word "through", we treat these as intermediate outcomes under the overarching outcome objective of conserving and protecting biodiversity.

The project objectives and design were consistent with other parallel Bank-funded projects including the Sustainable Productive Landscapes Project (P159835) and the Strengthening Entrepreneurship in Productive Forest Landscapes Project (P164661).

The project objectives and investments were also aligned with the Mexico National Biodiversity Strategy which was consistent with the global Convention on Biological Biodiversity and its associated Sustainable Development goals. There was also consistency with Mexico's National Climate Change Strategy Vision 10-20-40.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Conserving and protecting nationally and globally significant biodiversity in Mexico through mainstreaming biodiversity friendly management practices in productive landscapes in priority biological corridors.

Rationale

The central element in the theory of change was that improving the quality of, and extending the area of, biodiversity-friendly land use practices in productive agriculture would lead to conserving and protecting biodiversity. This was to be achieved through ensuring win-win changes that gave farmers incentives to develop more biodiversity friendly landscapes.

A. Conserving and Protecting Biodiversity

Outcomes

The language "conserving and protecting" in the objective is not entirely clear. It could be interpreted as merely maintaining existing populations of flora and fauna. However, the fact that many of the investments were aimed at enhancing and extending the area of improved habitat rather than holding it at its' current state suggests that there was an expectation that species within these corridor-connected ecosystems would expand in terms of numbers of individuals and numbers of species. In other words, there was an expectation that there would be, in due course, an enhancement of biodiversity not merely the conservation of a pre-existing state.

In assessing the achievement of this core element of the objectives, the question therefore becomes what measurable evidence of enhanced biodiversity at outcome or intermediate outcome level is it reasonable to expect within the five plus years of project effectiveness and what would be expected over a longer timeframe. Since most investments initiated in the early years after the planning process did not get more than two years into implementation by the date of project closing, it is unreasonable to expect measurable and attributable outcome level evidence in measured biodiversity, particularly given the inevitable fluctuation in populations due to seasonal fluctuations and population dynamics.

However, there is quite strong evidence on the substantial achievement of the *means* applied towards conserving longer-term biodiversity. The land area “brought under enhanced biodiversity protection” which was 81,462 ha against an original target of 34,500 ha. So the achievement was 233% of the original and 20% above the May 2017 revised target. While this area “under” enhanced biodiversity is classified in the ICR Theory of Change tabulation as an outcome, it was really an intermediate outcome, a means to the ultimate end of conserving biodiversity.

As reported in the ICR (Annex 6, page 51) the productive systems in the project areas held twenty species, three of them threatened and five of them endangered. The main mammal reported is the jaguar. The ICR

argues that the demonstration of the presence of the jaguar in the project communities, “in and of itself is a huge achievement because for a top-level predator to exist in an environment requires preservation of habitat with flourishing prey animals.” In other words, it proves there is a pyramid of prey support. The ICR presents evidence of a video compiled from the monitoring of jaguar and other species within one community, asserting that it “provides compelling evidence for the protection and conservation of biodiversity within the project area”. While perhaps promising, this finding alone does not offer any evidence of changes in numbers from the period prior to the project. However, as noted above, IEG accepts that it is too soon to measure attributable fauna impacts, especially for large mammals with relatively slow population growth capacity.

The ICR reports that there was a consultancy funded on “the jaguar as a key element in the biological monitoring of the project” but beyond the verification that the jaguar is a key species as an indicator of habitat quality, it is not clear that this consultancy revealed any evidence of changes attributable to the project.

In addition to the jaguar, there was a focus on avian monitoring. The ICR reports a baseline survey census of birds followed up by crosscutting samples in communities to measure the abundance of birds observed by trained producers. The ICR reports that, as a baseline, a total of 388 species were recorded in the area of the Mesoamerican Biological Corridor of which 75 were either endangered (6), threatened (28), or under special protection (41). However, it is difficult to link this wider species data with the data later collected locally by project producer beneficiaries. The ICR reports that at the project baseline, using 95 points of contact, 105 bird species (27% of the 388 baseline in the total corridor area) were identified in the project area and at the time of the follow-up identification surveys by producers, 63 of these (60%) were observed of which two were threatened species. The ICR asserts that “the observation of such a large share of species by producers signals a high degree of conservation of biodiversity in project communities.” It is certainly plausible that observing 60% of the known species population supports a hypothesis of improved habitat but nevertheless it is difficult to interpret this figure in relation to the baseline.

A weakness in the indicators was that, although it was clear from the outset that the measurement of biodiversity changes by the time of project closing was going to be difficult because of the lag in impact, intermediate outcome indices of vegetation changes were not designed. For example, in a project with significant tree planting, the survival rate of seedlings and the biodiversity spread of the surviving planted trees and shrubs could have been measured. However, any such poor survival rates would presumably have been reflected in a failure at the PG level to meet the defined biodiversity criteria on the inspection of subproject activities.

On the achievement of the biodiversity outcome locations in relation to the need for connectivity of habitat for the overall corridors, the maps presented in the ICR do indicate that selection of sites was substantially consistent with the location of important corridors.

Overall, there is substantial evidence of the improvement of vegetation and habitat by the project actions through the certification of project-supported PG/PA investments, for example towards shade tree coffee production systems, but there is limited quantitative evidence of resultant changes to date in fauna, although some indication that bird numbers were starting to build. IEG concludes that, given the clear improvement in habitat, there is a reasonable expectation that the project interventions will achieve enhanced spread and depth of biodiversity over the next few years. There is also a reasonable expectation that, with producer monitoring now established, biodiversity changes will become measurable. Based on this reasonable expectation argument, the achievement of this element of the objectives is rated Substantial but with the important qualification that an expectation should not continue to be a valid argument in any second or third

phase activities because by then biodiversity change measurement in terms of area and quality should be possible.

B. Biodiversity Friendly and Sustainable Management Practices.

Outputs

The number of producer groups participating in the biodiversity friendly activities was 182 which was 94% of the original target. Approximately 10,000 producers completed training, 120% of the target. All the overarching 27 Producer Associations covered in the revised target provided quality control services to group members. 42 business alliances with buyers were established, exceeding the revised target by 31%. Some 22 activities were undertaken for capacity strengthening, achieving 88% of the original target. There were also a number of South-South exchange training activities implemented as planned. For each subproject set of activities implemented by producers supported under the project, there were formally specified biodiversity-friendly criteria related to that activity that were required to be verified as being under implementation by the producer for him/her to be classified as meeting the project's biodiversity friendly criteria. Parallel to this was a moderate level of product certification, although in the end this did not reach the highest levels of certification planned.

Intermediate Outcomes

The theory of change for this intermediate outcome was that improved land management practices, addressing vegetation and soils, would lead to more landscapes supporting improved biodiversity, an intermediate outcome that would lead towards the ultimate outcome of improved conservation and protection of nationally and globally significant biodiversity.

As noted above, there is considerable evidence that targets were largely met or exceeded in creating a biodiversity friendly environment. This was partly aided by the fact that significant exchange rate changes provided more local funds to allow upward revision of a number of targets including numbers of producers and treated land area. However, this windfall in local funds was partly negated by the lower government contribution but then partly boosted by the additional private funding added later.

Considering changes in the value of benefit streams due to price changes, especially the decline in coffee prices, and other negative impacts such as coffee yellow rust and bee diseases, not all the practices that were supported show strong evidence of being sustainable.

The main biodiversity friendly activities supported (showing % subproject costs in total costs and the beneficiary hectares), and certified as meeting the biodiversity-friendly criteria, were:
1.Coffee (31% of costs; 22,864 ha; modest IRR). This included machinery and infrastructure to improve quality, coffee plantation renewal, pest and disease control, fostering a wider range of varieties, rainwater collection systems, and studies including baseline studies to guide plantation renewal plans and soil studies.
2.Cocoa (6%; 1,366 ha; no IRR estimated). This included seeds for native cocoa plants, fruit and timber species for the diversification of plantations, community nurseries, infrastructure, tools, and organic fertilizer.
3.Honey (17%; 11,815 ha; negative IRR). This included investments in equipment for production and extraction, collection centers, training in biodiversity friendly pest control, technical assistance, and training

workshops for Producer Associations.
4.Ecotourism (14%; 8,150 ha; low IRR). This included solar and wind powered power systems for ecotourism centers and resorts, equipment including low-impact boats, dry toilets, and storm water collection.
5.Silvopastoral (4%; 2,200 ha; high IRR). This included the division of paddocks with hedgerows and investment in rainwater collection for paddocks.
6.Forestry (28%; 22,864 ha; very high IRR). This included participatory monitoring systems, investments in environmentally friendly pest control methods, wood drying equipment, nurseries, chilling rooms, workshops, firefighting equipment, impact assessments on forest sanitation and regeneration.

By project closing, the total area brought under enhanced biodiversity protection was 81,462 hectares which was somewhat above the revised target but more than double the original target. The number of producers meeting the criteria for applying biodiversity friendly practices was 12,956, marginally less than the revised target late in the project but about twice the original target. The share of sales of goods and services produced under biodiversity friendly practices was estimated at 24%, approximately equal to the formally revised target but about double the original target.

While there is somewhat limited quantitative evidence on vegetation changes attributable to the project (as noted earlier, data on, for example, changes in tree seedling survival rates would have been informative) there are selected samples of photographic evidence and more reportedly available outside that presented in the ICR.

Overall, the achievement of biodiversity friendly and sustainable management practices was substantial. However, the current low financial and economic returns to the coffee, cocoa and honey enterprises raises questions about financial sustainability and future prioritization of component activities. However, it is plausible that prices, the main issue for coffee, will rebound in due course since current international prices are well below the long-term average.

C. Productivity and Marketing Benefit Incentives for Producers

Intermediate Outcomes

The theory of change here was that producers would only have the incentive to support and sustain biodiversity friendly land use practices if productivity could be sustained or improved and if there were sufficient incentives created by improved marketing offering higher sales values. This was a point strongly emphasized during IEG's discussion with the Project Team on sustainability.

Some 182 Producer Groups (94% of the total) participated in biodiversity friendly business plans which were then supported through investments, training, and technical assistance.

As noted above, the ICR reports (page 10) that 24.4% of sales by the project producers were products that had been produced under the recommended biodiversity friendly practices. This was marginally above the

target set. The evidence for this achievement was based on reports from PAs. The ICR notes that there were no silvo-pastoral sales reported from this activity, possibly due to a classification issue in reporting.

All the 27 PAs provided product quality control services to their networks. Some 42 business alliances with buyers for market differentiated products were established which was about 30% above the target set. The ICR notes (page 29) that this was the number of alliances “in which the value added of services and products produced under biodiversity friendly practices is recognized”.

Third-party certification of biodiversity friendly products from productive systems was carried out by CERTIMAX, the national agency responsible for certifying such biodiversity friendly products. CERTIMAX reported results for 24 of the 27 PAs. Subsequent verification of the sustaining of these practices on the ground was done by contracted consultants reportedly applying random sampling procedures.

There were six “differentiation instruments” developed and in use in the third party product verification mechanisms. This was originally intended to result in “bio labels” developed and in use under third-party verification. However, the bio-labels proved difficult and this indicator was revised to a less stringent criteria labelled “instruments for differentiation”, a first step towards a more stringent “bio label”.

While there is an assertion by the ICR that market differentiation helped to increase sales, and while there is some photographic evidence of transaction receipts covering biodiversity friendly sales, it is not clear from the evidence presented what the aggregate impact of this value added activity was on sales volume and value of products.

There were a number of information and knowledge activities through forums, trade shows, and exhibitions promoting biodiversity friendly products.

The ICR reports the achievement of 22 capacity strengthening activities in biodiversity friendly business practices.

While there is limited aggregate data on increase in sales from biodiversity friendly products, there is evidence of substantial activity aimed at increasing the earnings of products coming from biodiversity friendly land management producers including the Maya Forest Alliance.

Overall, given the limited evidence of aggregate changes in sales or profitability, IEG finds a moderate level of achievement of the productivity, marketing and incentives element of the intermediate outcomes. which, through enhancing profitability, was expected to support the biodiversity friendly practices.

Rating
Substantial

OVERALL EFFICACY
Rationale

The achievement of the objective of conserving and protecting nationally and globally significant biodiversity is rated, on balance, Substantial. However, this is largely on the basis of an *expectation* that the conditions for future measurable conservation of biodiversity will be attained since it is too soon for attributable outcome changes to be measured. This outcome expectation is built on a substantial level of achievement of the first intermediate outcome which was biodiversity friendly management practices and a somewhat less than substantial level of achievement of the second intermediate outcome which was to create productivity and marketing incentives for producers. In weighing the overall Efficacy rating for the elements of the stated objective, we treat the second intermediate objective of creating the incentives, where sales improvement evidence is limited mostly to individual cases, as being at a lower level in the hierarchy of the theory of change since it is one of several means supporting the achievement of the higher level intermediate outcome of biodiversity friendly practices. It is these biodiversity friendly practices that ultimately are expected to support the biodiversity protection outcome that is rated Substantial.

Overall Efficacy Rating

Substantial

5. Efficiency

There was no aggregate economic analysis provided ex ante in the PAD, only the standard GEF required incremental cost analysis. However, subsequently, during project implementation, each subproject was required to produce a business plan which included a financial feasibility analysis for each case.

Overall, the project achieved considerably more than planned in terms of area covered with somewhat less funds than anticipated.

The ICR finds an ex post internal rate of return of 15.2%. The methodology was discussed with the Project Team (August 1, 2019) and appears to be generally sound. The baseline pre-project year was 2014 and the project cost streams and sub-project models investments that were aggregated ran from 2015 to 2018. The 15% IRR is above the assumed social discount rate of 10% which, according to the ICR, is the rate currently recommended for project economic feasibility analysis of public projects in Mexico.

The analysis found a Net Present Value of US$5.4 million and a Benefit/Cost ratio of 1.2. The assumptions used were the total costs of the project including counterpart funding and in-kind contributions taking into consideration the costing structure for the individually prepared Business Plans. The analysis estimated an incremental Net Present Value per beneficiary per year of US$329 and per hectare per year of US$69. The ICR reports that the rate of return and net present value found in this case “approximates those reported by similar projects … in the Latin America and Caribbean region that finance business plans promoting the adoption of good agricultural practices”.

A sensitivity analysis is presented in the ICR which tested a number of alternative scenarios including: without indirect cost; with increased gross income of 20%; with production cost increases of 20%; and with a gross income increase of 10% on top of a production cost increase of 20%. Overall, the sensitivity scenarios show that

the internal rate of return is relatively insensitive to changes. This is to be expected with several very high component IRRs within an aggregated stream.

The most significant finding of the efficiency analysis is that there is a wide range of rates of return and benefit/cost ratios across the different subproject categories showing forestry and silvopastoral subprojects to have very high rates of return and coffee, eco-tourism, and honey production with rates of return below the social discount rate. The low rate for coffee is attributed in the ICR partly to the impact of yellow rust disease, with farmers having to replace diseased trees, and partly to a substantial decline in international coffee prices. Given that coffee prices by project closing were well below the long term average, it would be a reasonable expectation that prices would rebound and therefore that this low coffee IRR may be a temporary phenomenon. The efficiency analysis did not use international real price projections,however these are highly speculative. The disease future for coffee is unpredictable and partly dependent on climate.

The low rate of return from honey, according to the ICR, may be due to informal marketing of honey so that incremental productivity did not pass through the associations' books. Other reasons include Colony Collapse Disorder and the fact that maximum productive potential of colonies is only achieved in the medium to long-term, suggesting higher production in future years that was not fully factored into the benefit stream.

The fact that it was the components involving trees, both forestry and silvo-pastoral, that had the high rates of return raises two sets of questions. First, for the longer term, about the design and direction of future projects, whether they should focus less on the lower return (and possibly lower biodiversity?) coffee, cocoa, and honey activities. Second, whether the methodology and the attribution and cost assumptions are, in fact, correct for the components involving trees since some of the investments were quite modest incremental investments not easy to link to the entire gains in the sales values.

It is important to note that the aggregate rate of return is likely an under-estimate since it includes no valuation of biodiversity changes nor any tourism benefits that may arise from improved biodiversity and the corridor connections, nor any carbon sequestration valuations.

Administrative efficiency was generally sound. Although the project had to be extended for 16 months, this was largely due to the increased project coverage enabled by the substantial exchange rate change although it was also partly due to implementation delays. There were quite serious budgeting problems during the project but the PIU was able to largely compensate for these with other resources and the favorable exchange rate shift helped. The ICR reports (page 13) that the institutional support from CONABIO for technical services and technology transfer units worked efficiently, helping to facilitate implementation efficiency. The ICR also points to the design of good quality investments aiding implementation efficiency at the group level.

Overall, Efficiency is rated Substantial but noting for the future that the higher return activities are, in economic terms, subsidizing the lower return ones. This suggests room for future changed priorities and redesign but still with an eye to how such redirection of priorities would affect the less easily valued biodiversity objective.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 ☐ Not Applicable
ICR Estimate	✓	15.00	90.00 ☐ Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Relevance is rated Substantial. The project fitted well with the national and Bank strategies at project closing as well as at the start of the project, although in a project that was intended to offer a win-win strategy pursuing biodiversity benefits and farmer profitability benefits, the objective outcome statement could have been formulated in a way that gave both these outcomes equal importance. Achievement of the stated project objective was Substantial on balance, although, at this early stage, this rating relies on a "reasonable expectation" argument for future biodiversity impact.

Efficiency is rated Substantial but the analysis shows a skewed distribution of rates of return across the range of subprojects supported, suggesting potential for future improvements in allocative efficiency. Overall, Outcome is rated Satisfactory.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

There is moderate risk.

Promising factors for the future of the project investments include: (i) that the PAs and farmers have an interest in success and the PAs demonstrated this interest during the project by putting in funds of their own; (ii) that there are price premiums for sustainable and organic quality products which gives some assurance of an incentive to producers to continue their AB investment activities (in discussion, the Project Team considered this extremely important for the future); (iii) that some of the project PAs are receiving continued support under the Forest Management and Entrepreneurship Project and the Sustainable Productive Landscapes Project; (iv) that the institutional capacity building, and the internal and external (south – south) knowledge transfer that was fostered offers hope of longer-term sustainability; (v) that the reorganization within CONABIO gives it improved capacity for the future; (vi) that government policy is favorable towards the promotion of biodiversity, allowing a reasonable expectation that incentives and support will continue to be offered for biodiversity friendly production; (vii) that the requirement in the future for the legal constitution of PAs, is likely to improve their capacity and their longer-term sustainability.

However, one weakness noted in the ICR that may have an impact on sustainability is the lack of direct financing channeled to producers themselves. This leaves the sustaining of much of the incentive more with the associations than with the individual farmers. However, while this suggests some risks, it would seem also to offer some advantages in institutional strength and stability at the intermediary level.

8. Assessment of Bank Performance

a. Quality-at-Entry

A World Bank preparation grant of US$130,000 was provided to assist in the design of the project and there is evidence in the PAD that lessons from similar projects were incorporated. The project was generally well-designed and creative. Design was thorough and took into account the lessons from other projects, particularly the substantial experience in the region built around similar producer organizations.

Most of the risks were well identified and mitigated in the design.

The institutional arrangements were carefully considered at both central and local levels. The support designed into the project to enhance the capacity of groups and associations was particularly strong as was the linkage to existing institutions and certification mechanisms.

There was a strong focus on technical support, especially at the group and association level. And this was well linked in activities such as species counting to the wider national and corridor on-going measurement activities, for example the bird counting program.

However, there were a few weaknesses. First, as noted earlier, and as noted by the ICR (page 20) there could have been a stronger linkage between the conservation objective and the productivity and livelihoods objective. Second, the Results Framework had no indicator measuring directly the conservation and protection of biodiversity. The implicit assumption in the Results Framework was that bringing a landscape area “under enhanced diversity protection” was sufficient to measure an outcome. The Project Team advised that this was considered sufficient by GEF. While measuring the total area that is following an agreed set of land management practices, as specified in PDO indicator 1, allows some degree of expectation that the desired outcome will eventuate, it is not itself a direct measure of the conservation of biodiversity.

It has been noted earlier that the project timeframe was insufficient to be able to measure changes in species numbers and distribution but more focus on intermediate outcome indicators, for example tree seedling survival rates, would have given better evidence that the project was on track for the biodiversity aim.

The ICR (page 20) notes that the design could have done better at enabling the transfer of funds not only to collective activities but to individual non-farm investments and that this would have strengthened participation, a valid observation but with challenging financial management and procurement implications in relation to intermediary capacity.

The ICR also notes some weakness in anticipating counterpart funding risk.

Quality-at-Entry Rating
Satisfactory

b. Quality of supervision
Supervision missions were regular and involved a substantial range of specialists. The ICR particularly notes the role of procurement and financial support staff. There is evidence that Bank staff were proactive in dealing with implementation issues including slow disbursement.

The ICR notes that, following the Midterm Review, there was a downgrading to Moderately Unsatisfactory of several key performance ratings, mostly due to financial management issues and flow of funds problems to Producer Groups. There is evidence of creativity in finding solutions with the conducting of an online satisfaction survey of the 27 Producer Associations. There was also the development of an Action Plan and a disbursement plan to resolve problems.

Bank staff were instrumental in changing aspects of the original M&E system and maintaining pressure on the PIU to implement evaluation. However, there were limitations in the client's experience that were not within the Bank team's control.

Quality of Supervision Rating
Satisfactory

Overall Bank Performance Rating
Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design
The M&E system was established within CONABIO (the National Commission for Knowledge and Use of Biodiversity). An integrated Information System for Management and Evaluation was designed at the start of the project. This M&E tool is available on a website (pspsb.info). The intention was that the biodiversity information collected through the system would be integrated into the CONABIO database and passed on to the World Information Network of Biodiversity.

The ICR characterizes the M&E system as "well-designed" but assesses that it would have benefited from a comprehensive plan, a clear information flow chart, and clarification of roles and responsibilities. The ICR notes that the exception was species monitoring.

Some weaknesses in the user-friendliness of software design by producers were noted.

b. M&E Implementation

There was regular reporting. The Project Implementation Unit prepared good quality reports and carried out targeted studies and evaluations. The PIU provided a strong midterm evaluation report, an end of project evaluation report, and a Borrower Completion Report.

However, the ICR finds that there was a lack of clarity in the roles and responsibilities for information management and operational issues affecting management of the system. Some modules of the system were not fully installed until 2017. This caused problems at the beneficiary level of evidence.

There were weaknesses in the survey firm contracted for the impact evaluation due to lack of experience.

The ICR reports that a strength was the associated third-party verification by the agency responsible for certifying organic products and processes which enabled triangulation of the achievements in biodiversity-friendly and sustainable production land management systems.

c. M&E Utilization

The ICR reports that stakeholders relied heavily on the M&E system including for verifying the achievements set in the Results Framework and for financial management and procurement. The information was presented in regular reports and the ICR reports that it was useful for keeping the Bank informed during supervision missions for input into the Implementation Supervision Reports.

The results of M&E findings were useful as inputs for the South-South knowledge exchange activities including training and workshops. CONABIO carried out a number of studies on sustainable production systems and biodiversity impact in the Mesoamerican Biological Corridor.

The ICR reports (page 18) that the biological monitoring made an important contribution and that this knowledge was promulgated at regional workshops and contributed to the first Manual of Biodiversity Monitoring in Sustainable Rural Production. However, as noted earlier in discussing the achievement of objectives, there is still limited data presented in the ICR on species numbers and location and changes in the numbers of fauna and flora although it is still early to expect to be able to measure such changes.

On balance, the performance of the M&E system is rated Substantial.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was rated Environmental Assessment Category B both at appraisal and at closing. The OP/BPs that were to be applied at appraisal, which were still applicable at closing, were the following: Environmental

Assessment OP/BP 4.10; Natural Habitats OP/BP 4.04; Forests OP/BP 4.36; Pest Management OP 4.09; Physical Cultural Resources OP/BP 4.11; and Indigenous Peoples OP/BP 4.10.

There was an Environmental Assessment which produced recommendations for each of the production systems. PAs were expected to report on specific questions related to meeting the environmental standards. The ICR reports that compliance with all the triggered OP's was satisfactory. However, there were some problems with some PAs not responding to the survey questions on environmental standards with the required frequency.

With respect to Social Safeguards, 22 of the 27 PAs included members from indigenous populations and the requirements of OP/BP 4.10 were met. The ICR reports that women's participation increased over the period of the project in 14 of the associations although it is not clear from the ICR what criteria were used to measure this. Five additional women were in managerial positions by the end of the project.

b. Fiduciary Compliance

Financial Management

There were funding problems during implementation and Financial Management ratings by the Bank were lowered to Moderately Unsatisfactory in 2016 due to issues with government counterpart funding and delays in the system of funding release. However, in the final 18 months, the FM rating was upgraded to Moderately Satisfactory as disbursements accelerated and as the project implemented Bank recommendations to improve the systems weaknesses.

Interim Financial Reports, unaudited, were often submitted late with delays between two and three months. However the Interim Financial Reports were deemed satisfactory and acceptable by the Bank. Audit reports found minor issues related to internal controls, mainly at the PA level, however the control recommendations made by independent auditors are reported to have been addressed.

The Borrower Comments (ICR page 49) note quite serious problems with disbursement delays from government agencies. Starting with fiscal year 2015, the PIU did not receive the resources agreed with the Ministry of Agriculture and Rural Development. The first contribution did not arrive until the end of October 2016. The second contribution arrived late in 2018 and was only 40% of the agreed commitment. Also, from the Ministry of Environment and Natural Resources, contributions were received in 2013, 2014 and 2015 but, again, the total was less than agreed and after 2015 no further contributions were received.

There were also financial management issues due to weak PA capacity since some of the newer PAs lacked experience and business maturity and some did not even have access to the Internet, requiring paper records. These weaknesses significantly lengthened the procurement processes.

The PIU was proactive in seeking alternative funds to make up shortfalls and received a significant additional amount in 2017 and 2018. They were also able to reach agreement with the World Bank to allow the use of GEF resources to support implementation of PA business plans as a stopgap pending receipt of government counterpart resources.

Procurement

The PIU was given assistance by Bank procurement staff to resolve some early problems and to improve their understanding of the Bank procurement guidelines. Training was carried out. No mis-procurement was reported.

c. Unintended impacts (Positive or Negative)

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d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Satisfactory	
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

The following lessons are drawn partly from the ICR but with a number of adjustments of language.

1. **Understanding local markets and market access mechanisms at the outset of a biodiversity-focused agriculture project can contribute to increased differentiation and value of products.** There is a substantial market information element in biodiversity friendly land use projects, therefore understanding markets and market access is important. In this case, the project put considerable effort into differentiating products and developing levels of certification.
2. **The scale of local and national demand for higher value products in a land use project relying on biodiversity friendly practices may limit the scale of biodiversity friendly activity that can be achieved unless there are significant international markets for some products**. In this case, the size of markets for some niche products may be insufficient to achieve greatly expanded adoption suggesting the need for sustained market research and nimble marketing.
3. **In projects calling for substantial government counterpart budget, project design needs to take into account federal budgetary regulations and practices and past counterpart funding performance to try to reduce the risk of unanticipated financing shortages.** In this case, funding from several agencies fell short or was delayed, a risk not fully addressed in the PAD and, to some extent, predictable.

4. **Testing and applying cost efficient methods for measuring and tracking local biodiversity changes may improve the effectiveness and efficiency of M&E in biodiversity projects.** The measurement of changes in biodiversity to evaluate the performance of project interventions in agricultural land use is costly and may become difficult to justify against the benefit stream. Therefore, it is important to find cost efficient technologies and methodologies. In this case, the high cost of statistically significant species monitoring over a sufficiently sustained period would be difficult to justify solely against the modest cost and short project time period.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is rated Substantial. It is generally well presented, well written, and analytical. The lessons are well formulated.

There is somewhat limited evidence on biodiversity, but whatever data was available by project closing has been presented.

Given the significant changes in the exchange rate, on top of shortfalls in government agency contributions and producer contribution, but with the addition of private funding, and PA and PG funding, some analysis of how each of these sources/changes affected the aggregate resources invested would have been helpful. Also, some discussion of the allocative efficiency implications of the wide differences in activity IRRs would have been useful to map future directions.

a. Quality of ICR Rating

Substantial